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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/936,634	06/04/2002	Larry Rushefsky	IO-1013US	8725
24923	7590	12/04/2003	EXAMINER	
PAUL S MADAN MADAN, MOSSMAN & SRIRAM, PC 2603 AUGUSTA, SUITE 700 HOUSTON, TX 77057-1130			MOLLER, RICHARD ALAN	
			ART UNIT	PAPER NUMBER
			2856	

DATE MAILED: 12/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/936,634

Applicant(s)

RUSHEFSKY ET AL.

Examiner

Richard A Moller

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Pre Amdt 24 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 9-15, 26-29, 36, 38 and 44 is/are rejected.
- 7) ☐ Claim(s) 16-25, 30-35, 37, 39-43 and 45 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____

- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

12 Sept '01
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RICHARD MOLLER
PRIMARY EXAMINER
11/28/03

DETAILED ACTION

Preliminary Amendment

1. This Office Action is responsive the Preliminary Amendment filed Oct. 24, 2003, which canceled claims 1-8 and added new claims 9-45. Claims 9-45 are pending.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 26, 27, 28 and 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Re claims 26, 27, 28 and 29, the phrase "the sensor" lacks antecedent basis.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 9, 11, 13, 14, 15, 36, 44: are rejected under 35 U.S.C. 102(b) as being anticipated by Tennes et al., (US 4,745,564).
6. Re claims 9, 11, 13, 14, 15, 36, 44: '564 discloses a impact detection apparatus, which teaches (Fig. 1): Package (housing 10); another housing (accelerometer means 22 (see Fig. 3)) within package 10; monolithic sensor module

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(accelerometer means 22) within the housing; plural sensor packages (34x, 34y, 34z) each having a sensitive or spatial axis orthogonally arranged with each other; and a coupled control circuit (electronic components such as microprocessor 14, ROM 16 RAM 18 and battery 20) (see '564, col. 4, lines 25-40).

7. Re claim 13: '564 also teaches a monolithic sensor module 22, in which the package is box or cubic shaped and/or has inherently hollow frame for enclosing the components of the module, such as the sensor and, for example, a buffer and/or filter (see Fig. 3).

8. Re claim 14: '564 shows Fig. 3 where the sensor 38, for example, is coupled to the sensor package 22.

9. Re claim 15: '564 teaches a sensor module 22, where the module inherently contains a cavity for receiving a sensor, wherein the box-shaped module would also inherently have one or more parallel surfaces and the sensor cavity would also have a bottom surface.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 10, 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over '564 in view of WO 99/16129, of record.

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11. Re claims 10 and 38, '564 teaches the claimed invention, except for the limitation of where the accelerometers 38 are "micro-machined". However, '564 teaches the instant invention as having an epoxy resin cast housing ('564, col. 3, lines 60+).

12. The term "micro-machined" is a commonly known term in the art of semiconductor sensor production. "Micro-machining" involves many types of steps including but not limited to grinding, polishing, etching, gluing, bonding and/or sealing.

13. Moreover, the Instant Specification fails to define or clarify what the inventors mean by the term "micro-machined". Accordingly, in the absence of any clear definition, the Examiner is at liberty to make the broadest reasonable interpretation of the claimed subject matter.

14. WO 99/16129 specifically mentions using a micro-machined sensor die (see Abstract) in which the sensor is sealed in a ceramic case to protect the sensor package from environmental effects.

15. Accordingly, it would have been obvious for one of ordinary skill in this art to modify '564' invention by substituting WO/99/16129's micro-machined acceleration sensors for '564's sensor 38 since micro-machining provides a method for uniformly producing 564's invention in order to protect the sensor assembly from environmental effects.

16. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over '564 in view of Kato (US 5,579,245).

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17. Re claim 12: Though '564 fails to expressly teach an ASIC control circuit, it is well known in the art of semiconductor sensor modules to produce application specific integrated circuits, such as micro-controllers.

18. Moreover, the Instant Invention fails to specifically define what comprises an ASIC.

19. '245 teaches (Fig. 3) an ASIC (14) for processing the inputs from a plurality of sensors (16, 18, 20, 22, 24) in which this ASIC has, for example, a neural processor 32 for correcting vehicle slip angle..

20. Accordingly, it would have been obvious for one of ordinary skill in this art to substitute an integrated or an ASIC type circuit, such as '245's dedicated neural ASIC, for 564's computer processing means comprising microprocessor 14, ROM 16, RAM 18 and battery 20, since this would allow for customized processing of '564's sensor input signals.

Allowable Subject Matter

21. Claims 16-25, 30-35, are objected to as being dependent upon rejected base claim 9, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

22. Claims 37, 39-43, 45, are objected to as being dependent upon rejected base claim 36, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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23. Claims 26-29 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard A Moller whose telephone number is 703-308-6715. The examiner can normally be reached on M-F 8:30-5:00, with the second Friday of the Off..

26. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron E. Williams can be reached on 703-308-4705. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.



Richard A. Moller
Primary Examiner
AU 2856